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A NEW METHOD OF

RAISING FLAX;

BY WHICH IT IS PROVED,

That IRELAND may raiſe annually
Many Thouſand Pounds Worth more FLAX
from the uſual Quantity of Land,
And from ONE FOURTH LESS SEED than
by the common Method.

WITH

TABLES, Shewing what Quantity of Seed
will ſow any Lot or Quantity of Ground.

THE WHOLE CONTAINING
Many uſeful and curious REMARKS on that
VALUABLE PLANT,

NEVER BEFORE MADE PUBLICK.

BY

C. HYNDMAN.

K

BELFAST:
PRINTED BY JAMES MAGEE, FOR THE AUTHOR.
MDCCLXXIV.

BRITISH MUSEUM

TO THE

RIGHT HONOURABLE AND HONOURABLE

THE TRUSTEES OF THE

LINEN AND HEMPEN MANUFACTURES OF

IRELAND,

THIS SHORT TREATISE IS INSCRIBED

BY

THEIR DEVOTED SERVANT,

C. HYNDMAN.

PREFACE.

HE that is acquainted with the theory of raiſing FLAX, will ſee how far I differ from thoſe who have wrote on that ſubject; but how far practicable and uſeful my directions are, will be beſt known to thoſe, who make trial of the inſtructions contained in the following ſheets. I am far from thinking that they are the beſt which can poſſibly be wrote on Flax; no, I hope to ſee ſome production, vaſtly preferable to this little treatiſe, and I wiſh this may prove a ſtimulus to ſtir up ſome able hand to write from experimental knowledge and not from ſpeculation on this uſeful plant; but till then, I hope theſe directions, if obſerved, will be of no ſmall ſervice. I do not expect that they will pleaſe every one; that would be too much to be expected; for it may happen that they *will not* pleaſe ſome great flax-farmers, for fear they will be a means of lowering the price of flax by its becoming more plenty and better at leſs expence; and that is juſt the end I have in view. It may alſo happen that this little book may diſpleaſe ſome men who have received great *national donations* for raiſing flax ------ but I hope they will have no better reaſon for diſliking it, than their dreading it may obſcure ſome of their glory——I think I hear one ſay, "The writer of this pamphlet can know nothing about flax, for I have never heard of his getting premiums from the Linen-Board for ſowing twenty or thirty acres with flax in one year——I am ſurprized that a man who (perhaps) never ſowed one acre in a ſeaſon, wou'd preſume to talk about flax; for it is he only who has ſown moſt for many years that knows the nature of it beſt." This man wou'd agree with one of the two ſailors who were diſcourſing about the qualities of ſea-water, and the cauſe of the tides; by and by they diſagreed in their hypotheſis, one ſaid, "*James Shiply* the boatſwain can decide the diſpute, for he is a very old ſailor. I fear, ſaid the other, *James Shiply* knows little of the nature of the ſea, for I ſuppoſe he never ſtudied it: I dare ſay (continues he) there are many who were never ſo far as the Streights, who know the cauſe of the ebbing and flowing of the ſea better than him. I'll be d---d (replied the other) if *Shiply* muſt not know the nature of the ſea better than any man in England, for he is the oldeſt ſailor in Britain; beſides he ſailed round the world with Admiral Anſon." Perhaps many when reading theſe Directions and Obſervations, will ſay they are very reaſonable and worth putting in practice; but what will be the conſequence of their approbation? It will be the ſame with the *ſermon* they heard, or the portion of *ſcripture* they read, when they ſaid, we ſhould all obſerve it; but, they are never ſeen to put the leaſt part of it in practice: I believe this is what Divines call, *Conviction, but not Converſion.* One will think he is following my directions; but how does he do it? When I bid him make his land ſmooth; he leaves it as rough as the rocks of *Magilligan.* When I ſay cover it two inches deep, if dry land, he is ſo lazy, that he does not cover it a quarter of an inch. When I adviſe to cover it about an inch if wet land; he is ſo inaccurate that he buries it five or ſix. Another bids the lads to ſow the Lint the new way; but ſets out to John Drams, to hear the News-papers read—— he does not know what that ſaying means, *The maſter's eye makes the horſe fat.* The ſons as well as the ſervants, after a great gloom and a curſe, begin to ſow the flax; but inſtead of making the mould ſmall and putting it on evenly; they leave it in lumps as big as their heads: they could do it well enough; but they have a heart-hatred to any contrivance, that requires a little more care and pains, although it tends much to their advantage, for they would rather hear of ſome method that would get them a night for a dancing; an hour to burn their ſhins at the fire; or, time to carve a trump-caſe---- I could ſay much about our lazineſs. It is from the Country-Gentleman, the rural Clergyman, the ingenious Farmer, the induſtrious Cottager and the friend of Ireland, that I expect thanks, from whom I have received many for the ſcraps I publiſhed on flax, in the News-papers. The Directions and Obſervations contained in the following little Treatiſe, are the fruits of experiments and obſervations: they are of that nature, that although you have neglected a part, you may obſerve the remainder in the following proceſſes; or if you have obſerved a part, they will be profitable, ſuppoſe the remainder is neglected: He that obſerves them moſt exactly, will find it his advantage. As to my directions for pulling in a wet ſeaſon, I ſay they are not only uſeful, but abſolutely needful in order to ſecure our crop of Flax. The management of Flax is not my favourite ſtudy in a ſpare hour, yet I think it is my duty to caſt in my mite to the public Good. If this little treatiſe ſhould happen to fall into the hands of any of the *Learned*, I would beg leave to inform them, that it was not my deſign to calculate it principally for their meridian. I would alſo have them to pardon my jocular method of laughing lazy people out of their lazineſs.-----

BALLIMENA,
March 25th, 1774.

C. HYNDMAN.

BRIEF DIRECTIONS AND OBSERVATIONS ON RAISING FLAX.

Of the Choice of SEED.

I PREFER a large plump ſeed, rather a little dark coloured; I make not much inquiry where it came from, if it has theſe qualities, and of laſt year's raiſing; but I have ſown a very ſmall ſeed from Philadelphia, which produced notable long flax: As to our Iriſh ſeed, I have never ſown any of it to my knowledge. I think, the buyers have a tolerable notion in the choice of ſeed, hardly any thing will tempt them to buy ill-looking ſeed, except want of choices, or the neceſſity of buying on truſt: were they as nice in the management of it in all other proceſſes, we would have enough and to ſpare, of as good flax as any in Europe.

Of the Time of Sowing.

FLAX is a very hardy plant, and in little danger of being hurt by froſt or ſnow: I have been told by thoſe, who have ſeen flax ſown in September, that it ſtands the ſeverities of the winter to a wonder; but how far it anſwers to ſow it before winter, let them that know tell: In *Ireland* it is in moſt danger of ſurfeits of rain. I think the beſt ſeaſon is between the 25th of March and the 25th of April; but I would rather ſow it later, as ſow it when the land is wet: I have had good crops of flax that was ſown in every week between the 25th of March and the 15th of May. Not taking notice either of the encreaſe or decreaſe of the moon, or any particular days which the ſuperſtition of ſome people may induce them to give a preference to; but only the dryneſs of my land.

Of the Choice of the Soil.

FLAX will do well in almoſt every kind of land in this country, provided it is not too much ſheltered with trees, or lofty hedges; but a good crop of flax may be raiſed with theſe inconveniencies if you ſow it a little thinner than common. Where the land is ſo level, that the water cannot leave the furrows in the time of rain it is not good. As to the choice of land in reſpect of richneſs, I ſtill think it moſt hazardous to ſow flax on very rich land; in general I prefer that which the preceding year carried wheat; barley; or land that has bore one crop after potatoes; or middling rich land that has lain out a year or two. Land whereon potatoes grew the preceding year, if properly managed, generally gives a good crop;, but many loſe their crop on this land, by an opinion that the moſt pulverized and looſe ſtate they can leave their flax in, when ſown it is the better for it; for this reaſon they either plough it, or make choice of the laſt dug: this is a great error; for it is the very nature of flax to wiſh for firm ground to grow on, provided the land has been brought to a proper tilth; therefore make choice of the earlieſt dug; if very ſolid, harrow it as will be directed for harrowing ploughed land: I appeal to all gardeners, of the danger that attends leaving the ground looſe where plants are ſown in the ſpring, whoſe ſtems or fruit is of more value than their roots, and even ſome of them whoſe roots are of moſt value.

Of preparing the Land.

I FEAR we will never ſee our country practiſe the beſt methods in preparing their land for flax, as many of them cannot get horſes to plough their land in ſummer; but this is not to hinder thoſe who have time and opportunity. The oftener you plow your land for flax the better, and if you give it the firſt ploughing a year or more before you ſow it, though it be very poor land, you may have a very good crop: If you have not an opportunity to plough it ſo long before ſowing; or you are not willing to loſe your ſummer's graſs: or the land you deſign for flax is carrying wheat, barley, or the like, the very year preceding your flax, give it the firſt ploughing before Chriſtmas, the ſooner the better, let it lie unharrowed, give it a ſecond in February,

and

and the third and laſt a day or two before you ſow it: obſerve, you muſt ſtill harrow it before you give it the ſecond and third ploughings, as the land is the better to remain unharrowed from the firſt to the ſecond and from the ſecond to the third ploughings. If it is dry weather, and your land dry, and perhaps you are going to ſow only a ſmall quantity, you may ſow your land the ſame day that you give it the laſt ploughing. If you cannot get your land prepar'd according to the foregoing directions, give it the firſt ploughing even a few days before you ſow it: and if you cannot get it ploughed 'till ſowing-time, I cannot indulge you to plough it leſs than three times, ſuppoſe it is the ſame day you ſow your ſeed, for, once ploughing does not bring it to a proper tilth; and the ſecond brings up the weeds; but the third puts them down again: this third ploughing will coſt leſs than the preſent and future weedings when but twice ploughed. Be ſure to ſow your ſeed within two or three days after your laſt ploughing, if it is dry, and always harrow the land the ſame day you ſow it; otherwiſe your flax is in danger of the weeds getting above it: when it is ploughed this third time, the beſt method of harrowing, is to yoke two horſes to a harrow that is commonly drawn by one, tie on that end of the harrow which is hindmoſt, a piece of timber that will make the harrow a proper draught for two horſes; or if it is a hinged harrow put the one half on the other, (this method of harrowing I often practiſe on my oats-land) when thus harrowed carry the ſtones to the ſides and ends of the land, or throw them in heaps in every ſecond furrow: if it is wet land, roll it acroſs the ridges with a light roller; but if it is light land, with a heavy one: there are different ways of making a roller heavier; I think the beſt method is to drive two pins into the frame, viz. one above each gougion, on every pin hang a half hundred weight, or rings may be fix'd in two ſtones of any equal weight, which anſwer as well as the half hundred weights.

Of what utility the ſpiky roller is to flax ground, I do not yet experimentally know. If you have no roller (which I fear will be often the caſe) yoke your horſe or horſes to the very middle of the ſide of your harrow or brake, and turn the pins up, then draw the horſes along the ridges which will break a great deal of the clods and ſmooth the land: when this is done,* dig one ſpade breadth in the middle of the furrows; but if there is little mould in the furrows you may incline to the ſides of the ridges; leave the mould in the ſame place where you looſen it, for your ſeed is not yet ſown, nor, are you at any time to put on any mould with the ſpade: when you are digging the mould, never leave a clod bigger than a hen egg, if poſſible; but on the contrary never break the lumps on the ſown flax, becauſe that would diſplace the ſeed; for it ſhould be your whole ſtudy to leave all the ſeeds equidiſtant from each other, as well as from the ſurface: when the furrows are dug, level the ground a little better with the back of a rake, filling up your footſteps as well as the horſes, at the ſame time having a man, woman or child coming after you throwing clods, weeds and ſtones (even of a pound weight) to the ſides of the land, or in heaps in the furrows. Then lay out your land into lots of one, two, or more ridges, ſtepping ſuch lots in order to know how many *Iriſh perches* they contain; if you have no knowledge of meaſuring, perhaps the following tables may be of uſe to you.

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* I have uſed the common plough for making the mould; but I never could get a plough-man, who could make the trench and mould to pleaſe me.

I have invented a ſimple plough, with which, a man, a boy and two horſes, can make more mould and finer, than 24 men with ſpades, in the ſame time: this plough is of great utility, for making mould to cover wheat, barley, flax, potatoes, &c. It can be drawn by one horſe, if you will go twice along the ſame furrow: it will plow from two inches deep to twelve, and from twelve inches broad to any breadth. The curious may ſee it at my houſe.

TABLE I.

For a QUART.

Breadth of the lots or ridges.	Length they will take to ſow a *quart*.	
Feet.	yds.	feet.
3	61	0
4	46	0
5	37	0
6	30	1
7	26	1
8	23	0
9	20	1
10	18	2
11	17	0
12	15	2
13	14	0
14	13	0
15	12	1
16	11	2
17	11	0
18	10	1
19	9	2
20	9	0
21	9	0

TABLE II.

For a PECK.

Breadth of the lots or ridges.	Length they will take to ſow a *peck*,	
Feet.	perch.	yds.
3	70	0
4	52	4
5	42	0
6	35	0
7	30	0
8	26	2
9	23	2
10	21	0
11	19	0
12	17	3½
13	16	1
14	15	0
15	14	0
16	13	1
17	12	2¼
18	11	4½
19	11	0½
20	10	3½
21	10	0

Explanation of TABLE I.

IF a ridge or lot is 3 feet broad, it will take 61 yards in length, of that lot to ſow a *Quart*.

If 4 feet broad, it will take 46 yards long.

If 12 feet broad, it will take 15 yards, 2 feet long, &c.

Ex-

Explanation of TABLE II.

If a ridge or lot is three feet broad, it will take ſeventy perches in length of that lot to ſow a *peck*, that is eight quarts.

If four feet broad it will take fifty-two perches four yards long.

If twelve feet broad, it will take ſeventeen perches three yards and a half in length, &c.

An Example for the uſe of TABLE I.

If your ridge or lot is ſeventeen feet broad, then look for number ſeventeen in the firſt colum; oppoſite ſeventeen, you will ſee eleven, the number of yards, a ridge of ſeventeen feet broad will take to ſow one *quart*: then to find how many quarts your ridge of ſeventeen feet broad will ſow, begin at an end of it and meaſure eleven yards, and call that one; again meaſure eleven yards and call that two; and ſo on 'till you meaſure in this manner all the ridge: and for every eleven yards it is long, you muſt meaſure a quart of ſeed out of your ſack, putting it into the ſowing-ſheet or apron, making allowance for any redundancy there may be above the laſt eleven yards at the end of the ridge. Now I ſuppoſe you have the ſeed in your apron, take an handful of it, and begin to ſow your ridge at the ſide towards the left hand, and ending at the ſide towards the right, then ſtep forward, and ſow as before, always obſerving never to ſow the handful at leſs than ſix or eight caſts, throwing it a good diſtance from you; you are never to ſow your ſeed with the broad-caſt, as wheat, oats, or the like is ſown ; but with your thumb ſtraight forward : you need not take much notice about the ſeed falling on the mould that is to cover it, becauſe what falls on it, the ſhovel will throw it undermoſt in ſhoveling: It is beſt to ſow your ridge or lot thin at firſt, and then ſow the remainder of the ſeed over the ſame lot; thus, you can ſow the very quantity on your lot, that you at firſt deſigned*.

When your ſeed is ſown, cover it from one inch, to two inches deep (according to the nature of the land) with the mould that you dug in the furrow; the lighter the land is it ſhould be the deeper covered : When covered, throw back the ſtones, clods, and weeds into the furrows; if very fine land, you will do it faſter with a ſhort teethed rake. I cannot adviſe to roll it when covered, for theſe reaſons, firſt, the horſes or mens feet that muſt draw the roller, would put much of the ſeed out of its proper place. Secondly, every clod or ſtone would ſink it below its level. Thirdly, the roller would break down the edges of the ridges.

TABLE II. Shews you what length in perches and yards, any ridge or lot will take to ſow a *peck*, from a ridge three feet broad to a ridge twenty-one feet broad, juſt as the firſt table ſhews what length in yards it will take to ſow a quart, at any breadth, from three feet broad, to twenty-one feet broad, and is to be uſed for a *peck* as the firſt is uſed for a quart. If you have left out a certain quantity of land for flax, theſe tables will tell you to a quart, how much ſeed you ſhould buy for it.

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* If you have no quart, cup, or mug, that is a quart, make a little ſquare box that will contain one ; remember that the quart, which ale and ſpirits are ſold by, in Ireland, is not the quart I mean ; for it takes directly a quart and half a pint of that meaſure to make a quart of dry meaſure. I think no prudent flax-raiſer will ever venture to ſow without his meaſure.

Theſe Tables are made in Iriſh meaſure, and allowing eight quarts, that is a peck to ſow ten ſquare perches, that is ſixteen pecks or four buſhels to the Iriſh acre: Nor dare I venture to adviſe you to ſow it thicker (I am confirmed in this opinion, from many experiments) unleſs part of your ſeed is not ſound.

Further Obſervations on Land that carried Potatoes the preceding Year.

Some people who have ſeen my former *Obſervations on ſowing flax*, have told me they could not trench their flax on potatoe-leave, becauſe the furrow where I directed them to dig, was either full of weeds, very wet, or little mould in that place. In ſuch caſes incline a little to the ſide of a ridge, and ſow that ſide of the ridge thinner, where you ſuſpect much graſs and weeds to riſe. I adviſe every one not to plough their potatoe-leave for flax, for the reaſons I advanced before on the choice of land, unleſs they have a very heavy roller to make it firm again: It ſhould be only harrowed, and then ſmoothed with the back of the harrow, and after that with the back of a rake.

Obſervations on the common Method of putting in the Seed.

The method in all flax-countries (as far as I have been able to learn) is to harrow in the ſeed (perhaps ſome rake it in, but this is not much better than the former) by this way ſome of the ſeed is left on the ſurface, ſome a little under it, and ſo on at various depths, even to four inches, and deeper in looſe land, this method is attended with the following diſadvantages.

1. If four or five days of moiſt weather immediately ſucceed the ſowing, that part of the ſeed which lies neareſt the ſurface will vegetate firſt.

2. If dry weather immediately follows, that ſeed which lies on, or a little under the ſurface, will remain dormant 'till rain come. By which we may obſerve, that both moiſt and dry weather equally cauſe what is commonly called *after-growth*; that is, a younger flax from the ſame ſowing; and this flax is commonly ſhorter, and if pulled, of conſequence will go down in the dreſſing. If by a favourable ſeaſon it comes to the length of the reſt, the younger and elder will not water alike; ſo that which is moſt watered will be cut down by the ſcutcher before the reſt can be dreſſed: And as the ſeed is lying (as I ſaid before) at ſo many different depths, every depth will have the ſame effect, that a different ſoil would have; and ſo they will produce ſtalks of many different lengths, thickneſſes and ages; any of theſe will be followed by a great loſs of flax in the dreſſing.

3. In this method birds pick much of the ſeed.

4. Much of the ſeed is carried down by the horſes feet in the harrowing, to ſuch deepneſs that it will never grow.

5. The harrow makes a great number of little ridges; and in dry land and dry weather, the wind often blows the duſt off their tops; by this,

much of the flax will be either blown out of root entirely, or its roots left ſo bare that it will die.

Obſervations on Trenching.

MY method, that is, trenching, (as above deſcribed) I call it mine, becauſe I believe it was never practiſed in *Europe* 'till I made various trials, for ſeveral years on different ſoils, and then I ventured to recommend it to the publick in the *Belfaſt News Letter*; and I know not, whether Mr. *Geo. Faulkner* publiſhed a copy that I ſent to him: it is preferable to harrowing or raking, for the following reaſons.

1. Hereby all the ſeed that is ſound will grow.

2. There will be no *After-growth.*

3. All the flax will be nearer one length, one age; the ſtalks when growing, at more regular diſtances, and more of the ſame thickneſs, will water alike; ſo conſequently, will not go down in the dreſſing.

4. Birds can pick none of the ſeed; ſo the ſame quantity of ſeed will ſow more land, and produce more clean flax, than by the common way.

5. It will not be ſo apt to lodge, as in general its roots are deeper in the earth.

6. The furrow is a lane for the air, ſo abſolutely neceſſary to the vegetation, ſalubrity and maturation of every vegetable.

7. The furrow is a drain in wet land, and even in dry land, in time of a great fall of rain; and does no harm to dry land in the drieſt ſeaſon.

8. In the drieſt weather, and drieſt land, you need not wait an hour for the appearance of rain; for if properly covered it will vegetate as ſoon in dry as in moiſt weather.

9. We may ſow our ſeed earlier in this way, than in the common, for the trenches will carry off the great falls of rain or ſnow that may happen, which might totally ruin flax ſown in the common method.

For the above reaſons, I think I may have the vanity to ſay, that if ever *Ireland* can ſave their own ſeed, it will be owing to trenching, as in this way we can have our flax earlier and more evenly ripe, than in the common method; but I have never made trial for want of a proper opportunity: if it is my lot, to live in Ireland a few years longer, I hope I will be able to ſay ſomething concerning ſaving the ſeed.

It may happen, that ſome will object, that the furrow takes up much of the land. I anſwer, that it takes up about one twelfth, which I think is not much. That it is expenſive and troubleſome will alſo be ſaid. True, it is a little more troubleſome and expenſive; but this method will amply reward whoever makes the experiment; and I am perſuaded, if this method is univerſally practiſed, this kingdom will annually raiſe many thouſand pounds worth more flax than by the common way, and that from the ſame quantity of land, and leſs ſeed, at leaſt one fourth, which would be an annual ſaving of more than twenty thouſand pounds in ſeed.

Flax ſown in the common way, from the time the firſt of it breaks through the ground untill it is pulled, may be compared to an army of irregular troops; ſome ſhorter, others taller; ſome younger, others elder; ſome in one coloured regimentals, others in another; ſome almoſt naked, ſome expert at their evolutions; others novices: But trenched flax is always like a well diſciplined

ciplined regiment; all are of the ſame height, all have the ſame regimentals, and their various evolutions are performed by the whole at an inſtant.

What I have ſaid concerning trenching flax, will in moſt caſes hold good in trenching oats, barley, &c.

Of Weeding.

Weed your flax, when about four inches long, ſtand in the trench and weed into the middle of the ridge, be ſure never ſet a foot whether bare or ſhod, on the flax.

Of the Ripeneſs of Flax.

It is not yet agreed, when flax is properly ripe, ſome adviſing to pull it greener, ſome riper. If flax raiſers were as curious to know the nature of this *grand plant*, as they are to know what the *Turks* and *Ruſſians* are doing——perhaps we might know exactly the beſt time for pulling: this remains for future experiments. The time I chuſe to pull my flax (if lodging or ſpecking does not oblige me to pull it ſooner) is when the leaves are withered half way up the ſtalks. Of the time of pulling, a little more by and by.

Directions and Obſervations on pulling Flax principally reſpecting a wet Seaſon.

MY plan in theſe directions and obſervations, will be, firſt, to ſhew the common practice, and as I am going along to point out the diſadvantages attending it: Secondly, I will ſhew my method, and its ſuperior utility.

The

The common Method of Pulling.

I. In a wet ſeaſon ſome pull their flax when it begins to ſpeck, and immediately put it into the water. This ſpecking is commonly called *firing*; ſome ignorantly ſuppoſing it ſtruck with lightening; whereas it may appear to the weakeſt obſerver, that the flax has been hurt much worſe for ſome ſummers paſt than formerly, when there was more thunder in one ſummer than is now in three or four: For it is evident there is moſt thunder and lightening in warm ſummers, and warm climates; and ours for ſeveral years have been wet and cold. Theſe ſpecks are cauſed by the leaves ſticking flat to the ſtalks, which mortify the filaments, or ſkin of the flax: There are other ſpecks occaſioned (as I ſuppoſe) by ſome mineral particles ſweating out of the ſtalks, or falling on them with the dews and rains; but I have not yet been able to diſcover their true cauſe. In this, and the two following methods, they bind their flax in a band made of two lengths of ruſhes or two lengths of the flax.

Obſervation.

The flax in this method being pulled perhaps a fortnight before it is ſufficiently ripe, is very tender, ſubject to rotting in the water and on the graſs, generally produces little clean flax, and that not good.

II. Theſe pull it at the ſame time as in the foregoing way; but put it into ſhocks, otherwiſe called ſtooks, and ſo let it ſtand one, two, three, or even ſo long as twelve days, before they put it into the water.

Obſervation.

AS the flax in this method is pulled green, there is much ſap in the leaves and ſtalks; and there being alſo a large quantity bound together, and perhaps pull'd when wet or in moiſt weather, it will heat in a few hours: and of conſequence the hearts of the ſheaves will rot in three or four days. This is the rottenneſs the country ſuffers ſo much by, and what they never take notice of. I am of opinion, that flax bound and ſtooked in this manner, will rot in thirty hours or leſs, if it happens to be warm moiſt weather.

III. A third let their flax grow to the ſame ripeneſs as in a dry ſeaſon.

Obſervation.

OFT at this time it is ſo much ſpecked that it is ſcarce worth pulling, and the little clean flax it yields is of the worſt kind.

My Method.

IN a wet ſeaſon when your flax begins to ſpeck much, pull it, and bind it in one length of the flax, or one length of ruſhes, the leſs the ſheaves are in any ſeaſon the better: bind it near the roots, as there the ſtalks are coarſer and fewer leaves; then ſtook it, and let it ſtand in the ſtooks as many days as you ſuppoſe it pulled before its proper ripeneſs. Note, it is a good way to lay it broad on the binding, and not to tie it for ſome hours if it does not rain. Obſerve alſo, if very dry weather comes in after you have pulled your flax, one third leſs time may ſuffice, to let it ſtand in the ſtooks; it is a good way, to lay off the hood-ſheaves in a dry day, and to put them on at night, by this, leſs time ſtanding in the ſtook will do to harden the flax.

This way I recommend in preference to the three former, for theſe reaſons.

1. The ſheaves being little, and bound where there are few leaves, it will not be in danger of rotting.

2. It will come with ſafety near to that wiſhed for ripeneſs; conſequently the fibres will be more ſolid and ſtrong, and ſo in leſs danger of rotting in the water or on the graſs.

In a good ſeaſon bind your flax as above recommended, and let it ſtand in ſtooks two or three days, in order to harden the tops.

Of Watering.

MOSS, lake (or lough) water, beſt.

Water let into a pit from a river or ſtream, next.

In a river next.

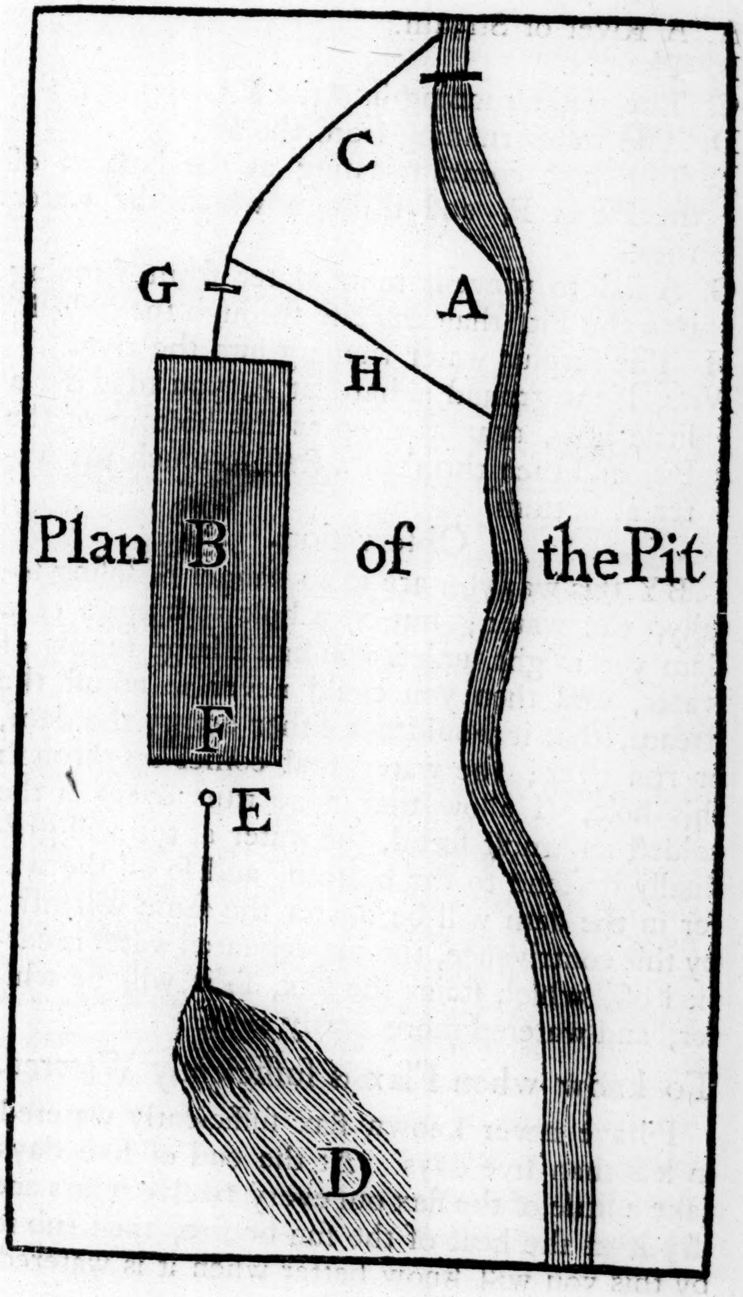
Standing water in a clay-pit, amongſt the worſt.

When flax is put into a pit, in the common way, it will be a rare thing if it is watered alike, or of a good colour; for at that ſeaſon of the year, water is always coldeſt at the bottom, and conſequently that flax which is uppermoſt in the pit may be watered two or three days ſooner than that at the bottom: for the time of its watering is in proportion to the heat of the water.

My Method of Watering.

Make a pit or dam, where you can convey water into it from a river or ſtream; a pit is much ſafer than a dam, becauſe a dam is in danger of leaking, or of breaking down, when your pit is full of water; or you may put in the flax before you let the water in, which is a better way: lay in the ſheaves with the roots towards the bottom, nearly ſtanding upright, and never lay two rows, or tiers above other, although the water ſhould be much deeper than one length of the flax; by this means there will be leſs difference in its watering. Never let it be throng in the water, put ſtones or ſods on it as in the common way; at the moſt diſtant place in the pit or dam, from that where the water runs in, and at about eighteen inches from the edge of the water, thruſt in, obliquely, a ſtaff or pole, that it may go into the water directly at the bottom of the pit; (this may be done before the flax or water is put in) when the ſtaff is pull'd up, the water will riſe after it, to the level of that in the pit. From this hole make a drain three or four perches long into the adjoining paſture or meadow, let it be a little deeper than the ſurface of the water, ſo that the water can run, by this the little diſcharge of impregnated water will be abſorbed by the earth and ſun, before it can run into a river; and thus you are in no danger of forfeiting your flax by the IX ſection of the linen bill. A ſlight view of the plan of this pit will readily explain its conſtruction. Obſerve, this pit muſt be made very clean, every time you put in freſh flax.

Note, It is a good way, to put fern, ruſhes, or any other weeds that will not ſtain the flax, both below and above it in the pit.


C
G
A
H
Plan
B
of
the Pit
F
E
D

EXPLANATION of the Plan.

A. A River or Stream.
B. The Pit.
C. The water running into the Pit.
D. The water running from the Pit.
E. The hole communicating at the bottom of the Pit at F, and through which the water riſes.
G. A ſod to prevent more water from running into the Pit, than can riſe through the hole E.
H. The ſurplus water running into the river.

Note, If the ground is hard at E, you may dig a little hole, near as deep as the bottom of the Pit, and then thruſt in a ſtaff to touch the water at bottom.

Obſervation.

BY this way you are in no danger of loſing totally, the water; but by a hole at bottom of a dam you might, unleſs you had a large ſupply of water, and then you could never ſo adjuſt the ſtream, that it would not either empty the dam, or run over; the water that comes up through this hole, (I allow that none runs over) is the coldeſt and moſt fœtid, the water at top will gradually deſcend to the bottom, and ſo all the water in the dam will be nearer the ſame warmth: by this contrivance, the impregnated water is carried off, which ſtains the flax, ſo it will be whiter, and watered more nearly alike.

To know when Flax is ſufficiently Watered.

I have never known flax ſufficiently watered, in leſs than five days. At the end of five days, take a little of the flax out every twelve hours and dry it at the heat of the ſun or fire, then rub it, by this you will know better when it is watered, than by any other method.

CAUTION.——Let no body think that a certain pit, or a certain river, always waters flax in a certain number of days: this would prove a great miſtake; for the ſame pit that took eight days laſt year or laſt week, may this year or week, take more, or leſs time according to the heat of the weather; coarſeneſs; or fineneſs &c. of the flax.

Of taking it out of the Water and ſpreading.

Take it out ſheaf by ſheaf, rinſing it gently: never let it lie unſpread above eight hours: ſpread it very thin and evenly, the thinner the better. I never lay the roots or tops of one row on the tops or roots of another, as recommended by ſome, for I think this ſubjects the undermoſt to the danger of rotting, unleſs it is ſpread on heath (called by many heather.) One acre of good flax, when ſpread will cover three acres.

Of Lifting.

Flax that has been water'd in good water, will grow whiter and whiter, whilſt on the graſs, 'till a certain time, after that it will grow a little darker and darker. If your flax was ſcarcely watered, it will improve much in fineneſs by lying long on the graſs; but if you let it lie too long it will become towy and weaker. You may judge of the fitneſs for lifting by rubbing a little of it when dry.

Lift your flax if poſſible, on a day that you think will be dry from morning to night; about eleven o'clock begin to lift, laying it on the graſs, with the tops towards the Sun, let it be laid broad and untied that it may be the more expoſed to the heat of the Sun, in this way a few hands will lift a large quantity in a little time: quit lifting at one o'clock, becauſe from one to the evening is little enough time to dry the flax: When you have quit lifting, begin and lay the flax in ſheaves on the bindings, ſtill leaving it broad with its tops towards the Sun; when you have made it all into ſheaves, tie it before the dew falls on it, and then put it into a houſe.

Of Drying.

If you got a dry day to lift your flax, and you have lifted it as above directed, it is dry enough for the mill; but if you were overtaken by rain in lifting, you muſt ſet it out of the houſe, in the heat of three or four days: Flax has condeſcended to live with me a part of fourteen ſummers; but there was never a pound of it dried by fire before it was dreſſed. I have ſeen ſome dry their flax on an oats or malt-kiln, and I believe, if done with care, it will not injure the flax; its tops ſhould be ſet undermoſt that they may be moſt expoſed to the heat. I do not doubt but that is a good method practiſed in *Holland*, that is, drying flax in large ovens of fourteen or fifteen feet wide, made on purpoſe for drying flax: perhaps ſuch ovens would be uſeful at our flax-mills; but that practice of drying flax over a great fire till it is brown, is a very pernicious one, for by this method of drying, it loſes its oil, becomes like hair; and although it is generally agreed, that flax improves much in fineneſs by lying ſome time unſpun after dreſſed; yet flax that is too much dried, will never recover it's natural fineneſs, nor will it improve in yarn or cloth, as other flax will.

Of making Flax into Handfuls for the Mill.

Take a handful, that is as much as a man can hold between his thumb and middle finger, gripping it near the top, then put this under your left arm, with your left hand open underneath it, and with the finger and thumb of the right hand take hold of the ſide of the handful and ſtrike it five or ſix times againſt a board or ſmooth wall; ſtill take a grip of a new lock of the handful, with your finger and thumb, for every time you drive its roots againſt the board: if after this is done you think the roots are not even in the middle of the handful, then open the heart of it and ſtrike it as before, 'till you make it even, when the roots are even, take the handful by the top-end with one hand, and ſtrike the root-end on the other hand, this will make the broken ſtalks fly out, which you muſt carefully lay along the ſide of the handful, always root-ends to root-ends, laſtly lift a few uſeleſs ſtalks and bind the handful as ſtrait as you can, putting the tying twice round it and no more. The method of making faſt the tying is by holding the two ends of it in your hand and twirling the handful round, and then fixing it's ends in the ſide of the handful. *Note*, always to tie it as near the top as it will keep in all the ſtalks.

After it is rolled in the mill, make it very even for the ſcutching, combing it nicely with your fingers; for every ſtalk that is left acroſs, the handful will be carried down by the ſcutcher and more with it. Perhaps *you* think I have been too particular in my directions for preparing flax to the mill, but I am ſure the *flax-dreſſer* will not think ſo too: and I am ſure it will be your intereſt to obſerve the above method of making handfuls, for more reaſons than I at preſent have time to ſhew.

If your flax is good, and you have obſerved the foregoing directions, every five ſcore pounds when made in handfuls for the mill will yield about eighteen pounds of clean flax, and every pound ſhould give three; four; or five hanks of flax-yarn beſides the tow-yarn.

The flax-dreſſer ſhould be very careful, never to let the mill go too faſt, particularly when he gives the flax the firſt ſcutching.

A ſpeculative Inquiry into the Cauſes of the Scarcity of Flax.

Firſt I will endeavour to ſhew what are not the cauſes, ſecondly what are.

1. It is not the want of ſeed; for theſe many years there have been imported moſt amazing great quantities.

2. It is not owing to the badneſs of the ſeed for in 1772 the flax promiſed very well 'till about a fortnight before its proper ripeneſs, and that year we had the worſt crop.

3. It is not owing merely to the ſeed arriving late in the ſeaſon; for in general I never knew ſeed ſown later, than in 1773, and that year gave the beſt crop that I can remember.

4. It is not the flax-mills; for I have made accurate trials, and I find the mills give a greater value of clean flax, than dreſſing at home.

The following reaſons appear to me to be the cauſes, that flax has been ſcarce.

1. Much of the ſeed is ſown too late.

2. As the land grows dearer, the people give the ſeed leſs ground; juſt as the woollen draper makes the flannels, &c. narrower as the wool riſes in the price. It is a pity that the Linen-bill does not ſay that every one that pays for ſowing eight quarts of ſeed muſt have a certain number of ſquare perches (I think ten Iriſh) to ſow it on, and let him pay for the land as he can bargain.

3. The main reaſon is the coldneſs and wetneſs

of our ſummers of late years, and alſo the ignorance of the people in managing it in wet ſeaſons, as I ſhewed in my Obſervations on pulling.

4. Perhaps our lands are not ſo fit for flax as formerly, becauſe they are kept more frequently in tillage, and ſo are too looſe for flax, as I endeavoured to ſhew elſewhere.

5. The fifth and laſt cauſe I will mention is a perpetual one; that is, the great averſion we Iriſhmen have to managing flax. There is a by-word in Iriſh—*Nealfiſs egum nach mhaphuſhe an lienn.* In Engliſh, *I do not know but he would water (or drown) flax:* that is, I believe he is a man of that lowneſs of mind, that he would condeſcend to the meaneſt employment for the ſake of gain, and that is the management of flax. Whence this averſion to flax? Perhaps our anceſtors were all ſhepherds; or perhaps the linen-manufacture was firſt introduced into Ireland by the *Dutch* or *Danes*, to whom we have a natural diſlike; and it is a conſequence when we are offended at a man's perſon, we generally deſpiſe his counſel and practice; although they are moſt reaſonable and ſalutary. My country-men, let all this prejudice againſt flax be forgotten, and let us attend it in ſowing, weeding, pulling, watering, ſpreading, &c. and it will amply reward us for our trouble. I was not bred at the plough-tail, neither do I live immediately by any branch of the linen-buſineſs; and yet I have attended flax in all its different proceſſes, in order to attain ſome degree of knowledge in this principal, yea *only* ſource of our wealth and grandeur.

THE END.

APPENDIX.

In the Year 1772, About the 20th of April.

N° 1.

I Sowed twenty quarts of flaxſeed on about 25 perches; it was ſown in the way recommended in my Obſervations on ſowing; it was pull'd (as I have adviſed to pull in a wet ſeaſon) on account of its ſpecking ten or ~~four~~teen days before it was ripe; ſtood ten days in the ſtooks: it was watered, &c. according to the foregoing directions: It yielded 120 pounds of clean flax from the mill, worth at leaſt eight pence per pound. If my ſervants had not neglected to cover properly a great part of the middle of the ridges, and had it been a ſeaſon that it might have ſtood until properly ripe, I think it would have produced 160 pounds: But I am of opinion, if it had been ſown and managed in the common way (as it was a wet, cold ſummer with us) that it would not have given 40 pounds. This grew on a heavy, level ground, not very rich; the field incloſed with lofty trees and hedges.

In the Year 1773, April 26.

N° 2.

ONE of my neighbours ſowed ſix quarts on 9¾ perches, which gave 66 pounds from the mill, worth ſixpence per pound. This was ſown in an open field, on very rich land; it was ſet with potatoes the preceding year; it was ploughed, rolled with a light roller, and trenched.

Nº 3. April, about the 26th.

ANOTHER of my neighbours ſowed 17¾ perches with 12 quarts; it yielded 87 pounds from the mill, worth ſeven-pence per pound. It was dried over a fire. If it had been only dried with the heat of the ſun it would have given much more and better. This was ſown on potatoe-leave, a very heavy, wet, cold, ſtony land, in an open field.

Nº 4. April 24th.

I Sowed 40½ perches with 28 quarts; it yielded 1336 pounds ſtricked (that is made in handfuls) for the mill; which gave 238 pounds clean flax from the mill, worth ſeven-pence per pound. *Note*, I ſtill value the flax as it ſells. Several of the ſpinners, who bought of this flax, ſpun five hanks of flax-yarn out of a pound from the mill, beſide the tow-yarn: ſome ſpun it to ten, others fourteen hanks in the pound. This totally removed my fear, that we could not have a big crop and fine too, at the ſame time. Six quarts of this were ſown on potatoe-leave, the remainder on land that carried one crop of oats after potatoes; this was all warm light ground: It was rolled and trenched. The flax began to ſpeck, for which we pulled it five or ſix days ſooner than we would have wiſhed: It was managed in all the following proceſſes, according to the Directions in this Book.

I know ſome will ſay, "We have had in the common method, as much as any of the above Numbers." This only proves that, in the common way, on ſome certain ſpot of ground, and perhaps in a good ſeaſon, they may have a large crop; but they do not ſhew us a way to get a big crop from wet, or poor land in a bad ſeaſon. I beg that ingenious Gentlemen, and Farmers, will make accurate trials and obſervations on my methods, and then compare them with the common way, before they condemn them as uſeleſs.

Now I will calculate the expence of ſowing and managing an IRISH acre of flax. I will leave out ſaving the ſeed, becauſe, at preſent I do not pretend to know much about it; and I am deſigned not to trouble the world with any thing but what I know by experience. I will make the Calculation from N° 1. I will compute an acre from Numbers 1, 2, 3, and 4, in another way.

CALCULATION *for an* IRISH ACRE, *from* Nº 1.

	l.	*s.*	*d.*
According to Nº 1. when 20 quarts ſow 25 perches, 128 quarts, or 4 Buſhels, will ſow an acre; and when 25 perches give 120 pounds, at 8 d. per pound, then an acre ſhould give 768 at 8d. per pound, equal to — — — — —	25	12	00
One acre of land fit for flax is worth - - -	1	10	00
Tithe — — — — — — — —		8	00
Ploughing and harrowing three times, and making it ready for digging the furrows ——	1	10	00
Seed 4 buſhels, at 10s. per buſhel. ——	2	00	00
Sowing ditto. —— —— ——			6
Trenching, 8 men one day, at 10d. per —		6	8
Weeding, 16 men one day, at 10d. per —		13	4
Pulling, tying and ſtooking, 16 men one day, at 10d. per —— —— ——		13	4
Putting in the water —— —— ——		5	0
Taking out of the water and drawing to the field —— —— —— ——		2	6
Spreading, 12 men one day, at 10d. per —		10	00
Lifting, tying, and drawing home — —		6	00
Stricking for the mill, 16 men one day, —		13	4
Drawing to the mill, at an average — —		6	00
Stricking after it is rolled at the mill, 16 men one day, at 10d. per — — — — —		13	4
For dreſſing 768 pounds, at a penny per pound, is — — — — — — —	3	4	00
Drawing home from the mill — — —		1	0
Total expence — — — — — —	13	3	0
Profit for the acre — — — — — —	12	9	00

Thoſe that have a Farm and Family, and ſow only half an Acre, or perhaps a whole Acre, will be apt to reckon in the following manner.

CALCULATION for an IRISH Acre, from Nº 1.

	l.	s.	d.
According to Nº 1. an Acre yields 768 pounds, at 8d. per pound — — — —	25	12	00
An Acre fit for Flax — — — — — —	1	10	00
It is ſown at the rate of 4 buſhels, or 128 quarts to the acre — — — — — —	2	00	00
Tithe, at an average — — — —		5	00
For dreſſing 768 pound at 1 d. per pound	3	4	00
	6	19	00
For labour and profit — — — —	18	13	00

CALCULATION for an Acre from Nº 2.

	l.	s.	d.
According to Nº 2. an Acre yields 1082 pound at 6d. per pound — — — —	27	1	00
An Acre fit for Flax — — — —	1	10	00
This Nº is ſown at the rate of 3 buſhels and three quarts, or 99 quarts to the acre, at 10s. per buſhel is — — — — — —	1	11	00
Tithe at an average — — — —		5	00
For dreſſing 1082 pound at 1 d. per pound	4	10	02
	7	16	02
For labour and profit — — — —	19	5	10

CALCULATION for an Acre from Nº 3.

	l.	s.	d.
According to Nº 3. an acre yields 784 pound, worth 7d. per pound —— ——	22	17	04
An acre fit for flax —— —— ——	1	10	00
Tithe at an average ——		5	00
This Nº is ſown at the rate of 3 buſhels 12 quarts, or 108 quarts, at 10s. per buſhel—	1	13	9
For dreſſing 784 pound, at 1 d. per pound	3	5	4
	6	14	1
For labour and profit —— — ——	16	3	3

CALCU-

CALCULATION for an Acre, from N° 4.

	l.	s.	d.
According to N° 4. an acre yields 942 pound, worth 7d. per pound	27	9	6
An acre fit for flax	1	10	00
Tithe at an average		5	00
This N° is ſown at the rate of 3 buſhels 15 quarts, or 111 quarts, at 10s. per buſhel	1	14	10
For dreſſing 942 pound at 1d. per pound	3	18	6
	7	8	4
For labour and profit	20	1	2

I hope no Landlord (after reading the above Calculations) will be ſo ignorant as to ſuppoſe, that, lands are of more value than he formerly thought they were, becauſe I have ſhewn what an acre can be made to produce; but let it be conſidered, that, it is hazardous for moſt farmers to ſow above an acre in a ſeaſon: moreover, if every farmer would ſow a large quantity of flax, it would become ſo cheap, that it wou'd not be worth ſowing any more than what could be ſpun in their own houſes. My principal deſign and deſire is to encourage every farmer to ſow more flax than he thinks can be ſpun in his family, and to manage it properly. If the farmer ſows a very large quantity (I think) he has a greater chance to loſe than to gain.

In the preſent year 1774, evidences from the counties of Wilts, Dorſet, Somerſet and Hants, were examined and aſked, before the Houſe of Commons (England) how much flax an acre would produce? The anſwer was, On an average 255 pound; (that is 412 pound to an Iriſh acre) which ſold at 9d. or 9d. h. per pound. I extract this account from a News-paper; but it does not inform me how many hanks of a certain fineneſs each pound could produce, that I might compare it with my calculations.

A View of part of the apparent ANNUAL Advantage ariſing from Trenching only.

In the COMMON WAY,

We annually ſow above 30000 hhds. worth 90000 l. theſe 30000 hhds. when ready for pulling, are worth l. 1 12 s. per buſhel; that is l. 11 4 s. per hhd. equal to l. 336000.

By TRENCHING,

We will ſow ſufficiently the ſame quantity of land with one fourth leſs ſeed, that is with 22500 hhds. Theſe 22500 hhds. when ready for pulling, will be worth one ſixth more (I believe one fourth at an average) than 30000 hhds. ſown in the common way. One ſixth of l. 336000, the

	l.	*s.*	*d.*
value of 30000 hhds. ſown in the common way when ready for pulling, is - - - - - - - -	56000	00	00
There is ſaved by ſowing one fourth leſs ſeed - - - - - - -	22500	00	00
ANNUAL advantage if all would trench their flax (except the coſt of trenching) amounts to - - - - - - - - - - - - -	78500	00	00

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FINIS.